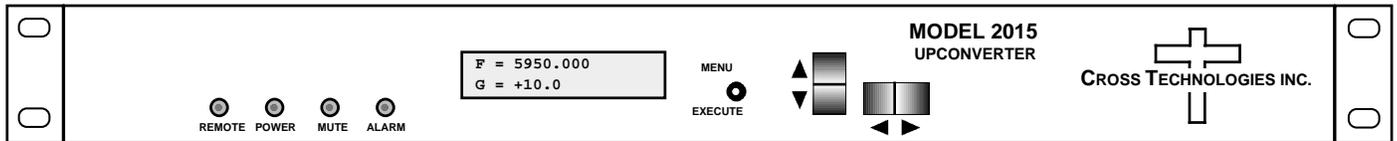


2015-59 Upconverter, 70 MHz IF to 5.850 - 5.850 - 6.425 GHz

The 2015-59 Upconverter converts 70 ± 18 MHz to 5.85 to 6.425 GHz in 1kHz, 10kHz, 100kHz, or 125kHz steps (user selectable) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide low phase noise and ± 0.01 ppm stability frequency selection. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), remote operation (yellow), PLL alarm (red), or the TX carrier is muted (yellow). Variable attenuators for the IF input and RF output provide a gain range of 0 to +20 dB as adjusted by the front panel pushbutton switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF input and 10MHz reference input and output, and Type N female for the RF output (other connector configurations available). The 2015-59 is powered by a 100-240 \pm 10% VAC power supply; and housed in a 1.75" X 19" X 16" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss 75 Ω /18 dB
Frequency 70 \pm 18 MHz
Input Level -30 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss 50 Ω /14 dB
Frequency 5.85 to 6.425 GHz
Output level -20 to 0 dBm
Output 1 dB compression +10 dBm

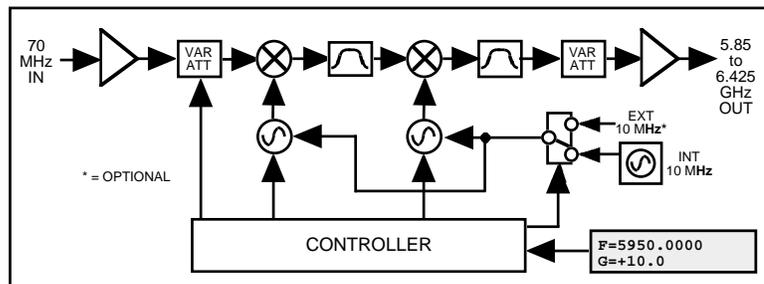
Channel Characteristics

Gain range (adjustable) 0 to +20 dB
Spurious Response < -50 dBC
Frequency Response ± 1.5 dB, 5.85-6.425 GHz ; ± 0.5 dB, 36 MHz BW
Group Delay, max 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear, 1 ns ripple
Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ± 0.01 ppm internal reference; external reference input
Frequency Step 1, 10, 100, or 125 kHz (selectable)
10 MHz In/Out Level 3 dBm \pm 3 dB

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-80	-90	-110	-120



Block Diagram

Controls, Indicators

Freq/Gain Selection direct readout LCD; pushbutton switches or remote selection
Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED
Remote RS232C, 9600 baud

Other

RF Connector Type N (female)
IF Connector BNC (female)
10 MHz Connectors BNC (female), 50 Ω /75 Ω
Alarm/Remote Connector DB9 - NO or NC contact closure on Alarm
Size 19 inch, 1RU standard chassis 1.75"high X 16.0" deep
Power 100-240 \pm 10% VAC, 47-63 Hz, 45 watts max

Available Options

Q - RS485 Remote Interface
Z - Attenuator 0.1 dB steps

Connectors/Impedance

M - 50 Ω N-type (RF), 50 Ω BNC (IF)

*10°C to 40°C; Specifications subject to change without notice